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## Trends in the Development of Ukrainian Grain Exports in the Context of Observance of State Food Security

Yuriy I. Danko\*, Oleksiy O. Krasnorutskyy

Sumy National Agrarian University  
40000, 160 H. Kondratyev Str., Sumy, Ukraine

► **Abstract.** Progressive increase in exports of Ukrainian agricultural and food position, maintaining the leading position of the state in world commodity markets in the agri-food segment, especially in the grain market should not pose a threat to food security and the emergence of shortages in the domestic market. The article is devoted to the identification of features and indicators of effective realisation of the export potential of the Ukrainian grain market in view of the food security of the state. The methodological basis of the study was a number of general and special research methods, in particular, the dialectical method of cognition, the method of comparisons, empirical, graphical and abstract-logical methods. The result of the study is the identification of trends in foreign economic relations in the field of grain trade. Potential threats to Ukraine's food security from the increase in the volume of export-import operations in the grain market have been identified. The need for state coordination of processes to eliminate potential threats to the internal market has been highlighted. Theoretical and methodological approaches to the regulation of foreign economic transactions in the grain market based on the definition of tools to correct existing disparities in the realisation of economic interests of producers and traders in the context of food security gained further development. Along with the positive changes in the development of international grain trade, potential threats to the country's food security and to domestic market operators were identified. Proposals for their elimination by active methods of state regulation were substantiated

► **Keywords:** export structure, grain market, export potential, provision of demand in the domestic market

### ► Introduction

Development of foreign trade in agricultural products has been in the center of attention of researchers for decades in view of the effective solution of problematic issues of stable increase of economic efficiency of Ukrainian agro-industrial production. At the same time, Ukraine was and remains one of the world leaders in grain exports, however, the growth of revenues from foreign economic activity does not affect the economic efficiency of producers, and, for the most part, increases the efficiency of intermediaries [1]. In particular, according to the UN FAO, Ukraine is one of the ten largest grain exporters and ranked seventh in the world in the 2020-2021 and 2021-2022 marketing years (in the grain market from July to June) [2]. In addition, the lack of effective export control tools, especially non-tariff, leads to threats to food security, as the choice between selling products on the domestic market to processors and exports is mainly decided in favour of exports conditioned upon higher economic efficiency of such operations for the enterprise-transmitter [3]. This can lead and from time to time leads to a decrease in inventories of domestic market

operators to critically low levels, which do not provide the minimum biologically justified amounts of food consumption [4]. Such a situation is a consequence of unsystematic realisation of the export potential of the agrar sector of the Ukrainian economy, requires a comprehensive scientific study and organisational, managerial and regulatory correction.

Problematic issues of foreign economic activity with agricultural products, involvement of agricultural enterprises in export operations [5-7], promotion of products of Ukrainian agricultural producers in foreign markets [8-10], ensuring its competitiveness in these markets, development and realisation of export potential of Ukrainian agricultural production leading Ukrainian agrarian economists was considered in detail by leading Ukrainian agrarian economists in their scientific works [11-13]. The study [7] analysed in detail the role and place of marketing mechanisms for the management of sales of agri-food raw materials, including grain products, in domestic and international markets, considering seasonal price fluctuations and other specific factors.

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\*Corresponding author

According to [8], the leading players in international trade today are not so much those countries that are provided with natural and climatic, soil, human resources, as those that actively develop and implement innovative technologies of cultivation, primary and secondary processing, storage and transportation of products, means of protection, fertilizers, advanced technical means, etc. According to foreign scientists [14], Ukraine is objectively included in the list of world leaders in grain exports and will maintain these positions for a long time.

According to some researchers [11] “Despite the significant potential, wheat production and grain quality in Ukraine is very unstable, conditioned upon the annual change in areas allocated for crops depending on demand for the crop, availability and quality of seed, a high dependence degree of crops on climatic conditions, methods and means of tillage, opportunities for the application of modern agricultural cultivation technologies, provision of labour resources, means of production and many other factors.”

Thus, despite the rather wide range of issues considered in the studies of these scientists, which is related to the development of export potential of Ukrainian agricultural production, the issues of rationalisation of export regulation, combination of tariff and non-tariff regulation remain insufficiently studied. This necessitates the definition of tools to correct existing disparities in the realisation of economic interests of producers and subjects of the circulation of products in the context of food security.

*The purpose of the article* is to identify the parameters of successful realisation of the export potential of the Ukrainian grain market in view of the food security of the state.

### ► Materials and Methods

At the first stage of the study, a key hypothesis was formulated about the decisive role of the grain industry in the development of Ukraine's economy and the development of food security. In the structure of this hypothesis, structural elements were singled out — questions, the answer to which could refute or confirm it.

- How does the grain industry affect the state's economy and food problem?
- Is the distribution fair to all participants in the process?
- Is it possible to improve the current state of affairs?

Analytical reports of the State Statistics Service of Ukraine, including generalised data of the Ministry of Economy of Ukraine and the Ministry of Agrarian Policy and Food of Ukraine served as an information base to confirm this hypothesis. Also, some of the information was obtained through personal interviews with agri-food producers, agricultural market operators, and in scientific discussions with fellow scientists during seminars and conferences.

By using the dialectical method of cognition of processes and phenomena, researchers were able to explore and generalise the basic principles of development of both the structure and dynamics of the object of study.

The next stage was the analysis of existing scientific developments and achievements of Ukrainian and leading foreign scientists on the regulation of foreign economic activity in the grain market, the development of export potential of the industry, which was carried out using the traditional monographic method. In this context, it was important to conduct a differentiated analysis of Ukrainian and foreign literature, from the standpoint of comparing methodological approaches.

To determine the impact of the growth of Ukrainian grain exports on food security in the country, a number of general and special research methods were used. In particular, by using the method of comparisons, the dynamic changes in economic indicators of exports were analysed, in particular by marketing years. The application of the empirical method allowed comprehensively assessing the current state of international grain trade by agricultural market operators and establishing the proportions of participation of agro-traders and direct producers. Some at this stage the method of observing the behaviour of market participants was applied.

To visualise the dynamics and structure of grain trade, we used a graphical method of presenting information. At the final stage, the authors made theoretical generalisations with subsequent formulation of conclusions based on the use of abstract-logical method.

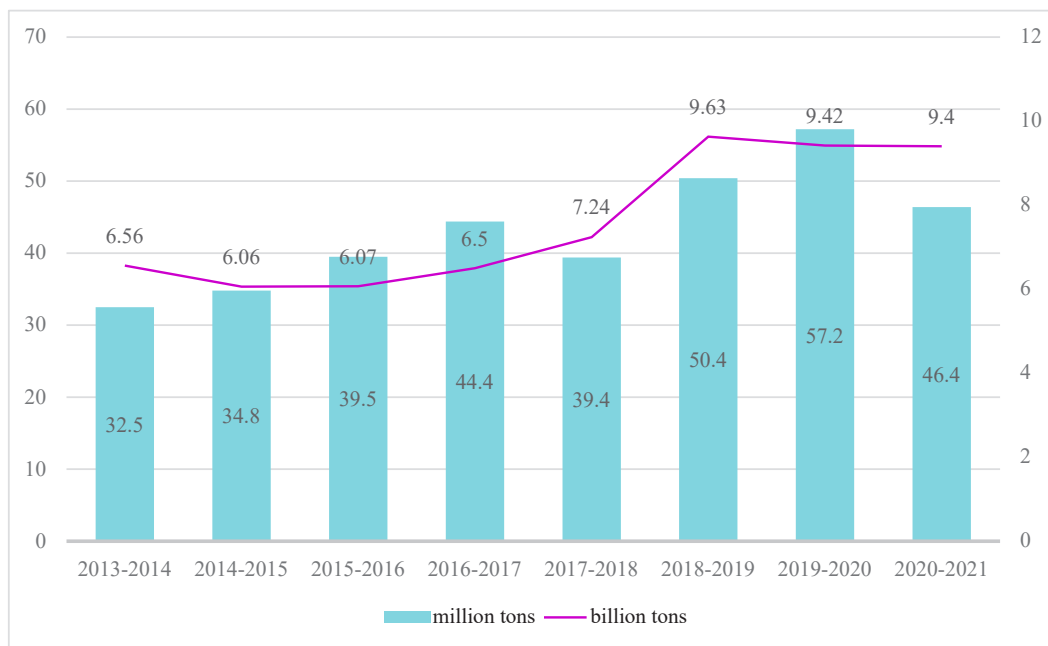
### ► Results and Discussion

One of the key guidelines for the development of the agricultural sector of the Ukrainian economy and an essential component of the system of agricultural policy of the state is to increase exports of Ukrainian agri-food products in order to multiply revenues from external sources.

The study of Chinese researchers [15] shows that foreign trade in grain significantly affects the parameters of safe functioning of national economic systems in the medium and long term, and has a significant impact on certain political relations and, consequently, political security. In addition, the paramount importance of effective intersectoral cooperation is determined by the leading role of grain in the agro-industrial economy, food security, the development of state, interstate and interregional economic ties of the country [16]. In turn, measures aimed at liberalising the regulation of grain exports in the tariff and non-tariff areas, which have been carried out in recent years, have strengthened the role of Ukrainian grain traders in foreign and domestic markets, because along with the real increase there are opportunities for a significant increase in the level of market power of the subjects of the circulation of agricultural products within the country, regardless of improving the efficiency of producers. At the same time, regulatory influence focused on the priority of exchange transactions with commodity consignments of grain in the domestic market has led to the acquisition of Ukrainian grain traders, conditioned upon the extremely high concentration of their capital, actual control over this area of trade in agricultural goods for further export.

The waiver of grain export quotas, finally implemented in 2019 [17], the only regulatory practice of the state made the conclusion of memoranda of understanding between the relevant ministry and grain market operators and led to significant threats to food security through deregulation of the market and uncontrolled leaks of significant production volumes abroad in the interests of a limited number of grain traders. In particular, in 2021 Ukraine exported 72% of grain produced [4]. This practice has been used in Ukraine for 11 years, however, when such documents were supplemented by means of quotas and export licensing, the state better regulated the proportions of exports, and the liberalisation of public-private relations in this area created a number of threats to related industries of agro-industrial production and food industry in terms of providing them with raw materials for processing and production of goods with a larger share of value added. At the same time, this situation poses the greatest threat to the food security of the state, as the largest incomes of exporters are generated by operations with grain food conditions, and the lack of effective control over the volume leads to a decrease in stocks in the domestic market.

It should be noted that revenues from grain exports in Ukraine in recent years are quite stable (Fig. 1) despite fluctuations in the volume of exported products in kind. During 2018-2021, the state's economy steadily received more than 9 billion dollars of grain export earnings. However, in this context, the problematic issue is the distribution of export earnings, primarily in terms of the participation of producers in the use of export earnings. Unfortunately, currently the marketing infrastructure of the domestic grain market is built so that producers, with the exception of a few vertically integrated structures, mostly holding type, which, along with foreign trade, are engaged in the production, storage and transportation of grain. At the same time, the largest share of producers, which are agricultural enterprises, are not able to participate in exports conditioned upon the inability to accumulate commercially significant batches of products of uniform quality, and therefore forced to cooperate with trade entities and vertically integrated structures that already export products receiving appropriate financial results. This does not contribute to the development, efficiency and financial and economic stability of most producers.

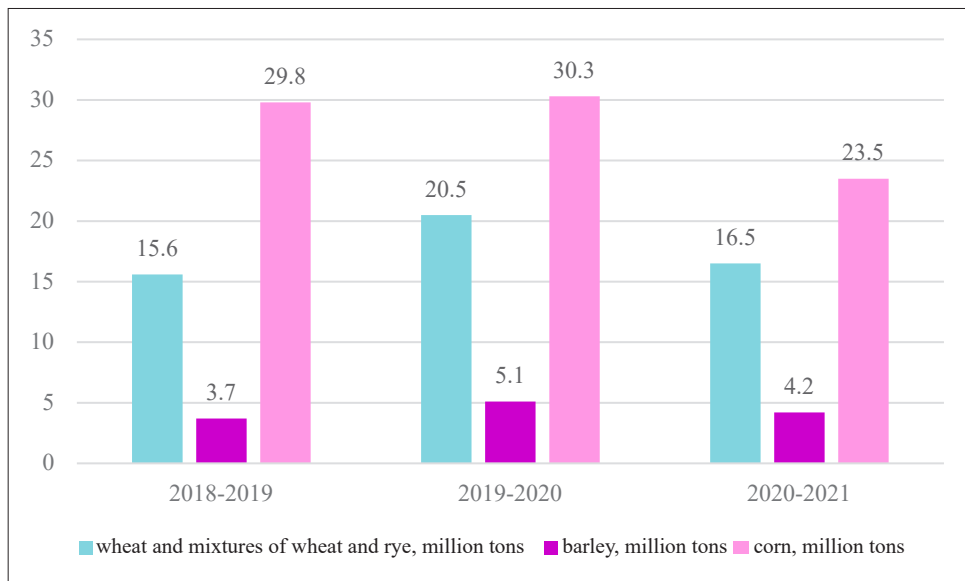


**Figure 1.** Grain exports in Ukraine in the 2013-2021 marketing years

**Source:** According to the State Statistics Service of Ukraine, the Ministry of Economy of Ukraine and the Ministry of Agrarian Policy and Food of Ukraine [18; 19]

Export orientation leads to distortions in the commodity nomenclature of grain production in the country, which consist in the reduction of types of crops grown by commodity producers, the corresponding changes in the structure of crop rotations, etc. The key reason for such shifts is the relative guarantee of sales of manufactured products. However, conditioned upon incomplete solution of the problem

of storage and insufficient prevalence of futures and forward instruments in the domestic grain market, inadequate functioning of the exchange trading system, price pressure from the subjects of circulation on the producer does not allow to fully realise the production and commercial potential of enterprises-producers. This is indirectly evidenced by the commodity structure of Ukrainian grain exports (Fig. 2).



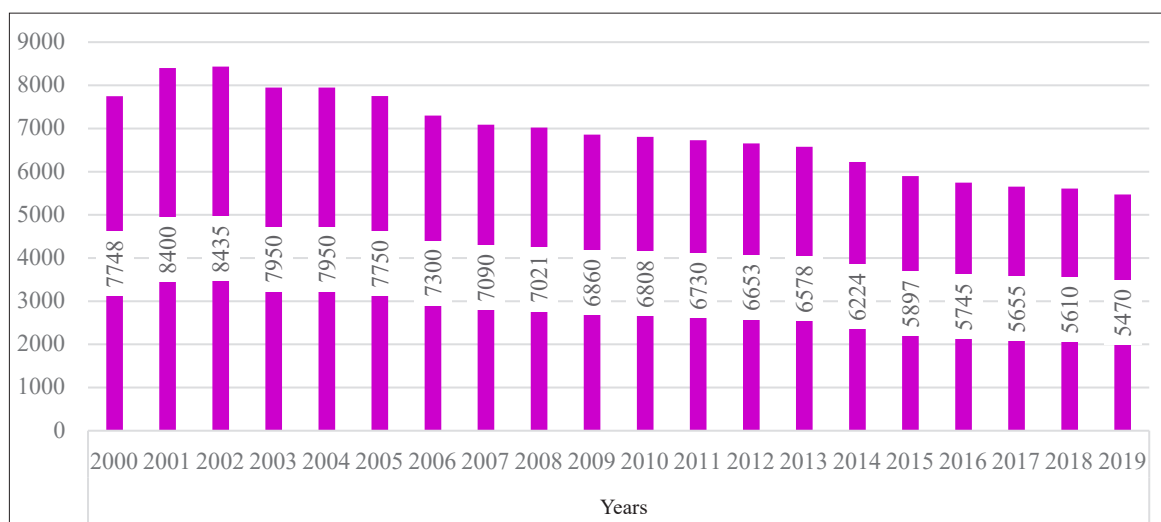
**Figure 2.** Commodity structure of grain exports in Ukraine in the 2018-2021 marketing years

**Source:** According to the State Statistics Service of Ukraine, the Ministry of Economy of Ukraine and the Ministry of Agrarian Policy and Food of Ukraine [18; 19]

Despite the significant successes of Ukrainian grain exporters in foreign markets, skillful finding of target foreign markets, successful positioning of batches of products on world commodity exchanges, well-established processes of transport logistics, export revenues are unproductive from the standpoint of the producer are distributed within the economic chain “production-storage-transportation-transshipment-export”. In addition, the non-systemic nature of non-tariff regulation of exports leads to threats to the food security of the state. Thus, the situation in the first half of the 2021-2022 marketing year led to a critical decline in food grain stocks of wheat and its deficit in the domestic market for the needs of its own flour and cereals industry. As of the end of December 2021, according to the Ministry of Agrarian Policy and Food, “15.6 million tons of wheat grain were exported out of 25.3 million tons specified in the memorandum between the central

executive body and grain market operators” [20]. It should be noted that the memorandum [21] does not contain information on the proportions of exports of feed and food grain of wheat. Accordingly, during the implementation of export operations, in particular, in the current 2021-2022 marketing year, wheat grain was mostly exported for food grain. As a result, the Ministry of Agrarian Policy and Food of Ukraine was forced to sign an annex to the memorandum in October 2021, which limited the export of wheat grain. However, its residues are no longer enough for domestic processing. As a result, Ukrainian companies began to increase exports of wheat flour from Turkey, produced, by the way, from previously exported wheat grain of Ukrainian production [20].

In this context, it is advisable to pay attention to the dynamics of food grain consumption in Ukraine (Fig. 3).



**Figure 3.** Consumption of food grain in Ukraine in 2000-2019

**Source:** data from the State Statistics Service of Ukraine [21]

The current system of regulation of foreign trade operations with grain, especially food, needs a significant transformation. It is also worth noting that grain is a low value-added product. However, despite the difficulties with the logistics of flour, cereals and pasta, it is the deepening of grain processing within the country and the export of high value-added products should become the main vector of development of Ukrainian production and exports.

### ► Conclusions

The study provides grounds to assert that the effectiveness and efficiency of Ukrainian grain exports are undeniable and have a significant impact on the state's economy in terms of foreign exchange earnings. However, the liberalisation of the system of tariff and non-tariff regulation, primarily through the refusal of quotas and licensing of exports critical to compliance, has led to disparities in supply in the domestic market. In addition, the results of the analysis allow speaking about the need to comply with the food security of the state in terms of providing wheat grain food conditions.

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The use of such instruments as the signing of memoranda of understanding for each marketing year between the central executive body implementing agricultural policy and grain market operators without the use of effective export control tools, the use of other instruments does not provide full guarantees of the absence of disparities in the domestic market and, consequently, domestic consumption.

Thus, in the current situation, the decisive role of the state as a full participant in the processes on the international market is actualised. In particular, the interests of the state in terms of economic and food security must be coordinated. The study considers the urgent need to reorient the structure of exports of raw materials at least for primary processing, which will allow obtaining added value. In addition, it is necessary to understand the risks associated with the use of seaports in the context of the existing military conflict with the Russian Federation in eastern Ukraine. Will the state be able to use their capacity to its full potential in the event of an escalation of the conflict, and what kind of transport can be an alternative in

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## Тенденції розвитку українського експорту зерна в контексті дотримання продовольчої безпеки держави

**Юрій Іванович Данько, Олексій Олександрович Красноручький**

Сумський національний аграрний університет  
40000, вул. Г. Кондратьєва, 160, м. Суми, Україна

► **Анотація.** Поступальне нарощування експорту української сільськогосподарської та продовольчої позиції, підтримання лідируючих позицій держави на світових сировинних ринках в агропродовольчому сегменті, передусім, на ринку зерна не повинно створювати загрози для дотримання продовольчої безпеки та виникнення дефіцитних явищ на внутрішньому ринку. Стаття присвячена ідентифікації особливостей та показників ефективної реалізації експортного потенціалу суб'єктів українського ринку зерна з огляду на дотримання продовольчої безпеки держави. Методичну основу дослідження склали низка загальних та спеціальних методів дослідження, зокрема, діалектичний метод пізнання, метод порівнянь і співставлень, емпіричний, графічний та абстрактно-логічний методи. Результатом дослідження є ідентифікація тенденцій розвитку зовнішньоекономічних відносин у сфері торгівлі зерном. Визначено потенційні загрози для продовольчої безпеки України від збільшення обсягу експортно-імпортних операцій на ринку зерна. Актуалізовано необхідність державної координації процесів з метою усунення потенційних загроз для внутрішнього ринку. Набули подальшого розвитку теоретико-методичні підходи щодо регулювання зовнішньоекономічних операцій на ринку зерна на основі визначення інструментарію виправлення існуючих диспропорцій в реалізації економічних інтересів товаровиробників та суб'єктів сфери обігу продукції в контексті дотримання продовольчої безпеки. Поряд з позитивними змінами у розвитку міжнародної торгівлі зерном визначено потенційні загрози для продовольчої безпеки країни та для внутрішніх операторів ринку. Обґрунтовано пропозиції щодо їх усунення активними методами державного регулювання

► **Ключові слова:** структура експорту, ринок зерна, експортний потенціал, забезпеченість попиту на внутрішньому ринку